

# **PUBLIC NOTICE**

Issue Date: September 30, 2008 Comment Deadline: October 30, 2008 Corps Action ID #: SAW-2008-00858

The Wilmington District, Corps of Engineers (Corps) has received an application from the Girl Scouts Hornets Nest Council seeking Department of the Army authorization to impact 3,993 linear feet of perennial, unnamed tributaries to the South Yadkin River, 1,267 linear feet of intermittent, unnamed tributaries, and 0.0104 acre of wetlands in association with the construction of a 23.42 acre lake in association with the construction of a Girl Scout Environmental Leadership Center. The project is located off of Hay Meadow Lane and Fairmont Road, north of Statesville, in Iredell County, North Carolina.

Specific plans and location information are described below and shown on the attached plans. This Public Notice and all attached plans are also available on the Wilmington District Web Site at <a href="https://www.saw.usace.army.mil/wetlands">www.saw.usace.army.mil/wetlands</a>

**Applicant:** Girl Scouts Hornets Nest Council

7007 Idlewild Road

Charlotte, North Carolina 27212

**AGENT:** Mr. Michael T. Brame

ECS, LLP

4811 Koger Boulevard

Greensboro, North Carolina 27455

#### **Authority**

The Corps will evaluate this application and decide whether to issue, conditionally issue, or deny the proposed work pursuant to applicable procedures of Section 404 of the Clean Water Act.

#### Location

The proposed project is located off of Hay Meadow Lane and Fairmont Road, north of Statesville, in Iredell County, North Carolina (35.8921 degrees north, -80.8362 degrees west), Harmony USGS Quadrangle.

#### **Existing Site Conditions**

The applicant has identified the locations of waters of the U.S., including wetlands, on the subject site. The applicant's representative, ECS Carolinas, LLC (ECS) performed a delineation of jurisdictional waters at the site between July 2007 and July 2008. Prior to visiting the site,

ECS reviewed the USGS Topographic Map, Harmony, North Carolina Quadrangle, the Soil Survey of Iredell County, the Geologic map of North Carolina, and the National Wetland Inventory Maps, prepared by the U.S. Fish and Wildlife Service to obtain information regarding the site.

- The USGS Topographic Map shows an unnamed tributary to the South Yadkin River in the proposed lake basin in addition to other unnamed tributaries on the property. The unnamed tributary to the lake forks near the northern end of the lake basin. The South Yadkin River is located along the southern boundary of the 700 acre tract. Several additional unnamed tributaries, a pond and drainage swales that contain streams or wetlands are depicted on the 700 acre tract.
- The USDA Soil Survey of Iredell County shows a stream consistent with the unnamed tributary depicted on the USGS map located within the proposed lake basin. The soil survey depicts three additional tributaries in the proposed lake basin. The South Yadkin River, unnamed tributaries, and a pond are depicted on the larger 700 acre tract. Soil series within the lake basin are mapped as:
  - Worsham Loam (Wo) The Worsham series consists of poorly drained, moderately slow permeable soils that occur around the heads of streams and the base of slopes.
  - <u>Cecil soils</u> (CfD2, CcD3 and CsE2) The Cecil series consists of well drained, moderately permeable soils that occur on ridges and gently sloping uplands.
  - <u>Moderately Gullied</u> (MoD) Moderately gullied land consists of well drained soils of uplands that have been cut by shallow gullies.
  - <u>Lloyd fine sandy loam</u> (LfE2) The Lloyd series consists of well drained, moderately permeable soils that occur on gently sloping to moderately steep slopes.

Several other soil types are mapped within the property boundaries. These soils range from Wehadkee fine sandy loam and Buncombe loamy sand, which are common around streams; to Cecil, Madison and Lloyd series soils, which are characteristic of uplands. The Wehadkee series is identified on the Hydric Soils List for Iredell County.

• The Geologic Map of North Carolina indicates that the site is located in the Inner Piedmont Belt of the Piedmont Physiographic Province. The soils encountered in this area are the residual product of in-place chemical weathering of rock presently underlying the site. In general, shallow unconfined groundwater movement within the overlying soils is controlled largely by topographic gradients. Recharge occurs primarily by infiltration along higher elevations and typically discharges into streams or other surface water bodies. The elevation of the shallow water table is transient and can vary greatly with seasonal fluctuations in precipitation. Movement in this water table is generally from higher to lower elevations.

• The National Wetland Inventory Map shows a pond and streams consistent with features shown on the USGS topographic map and the soil survey. In addition, the inventory map shows two wetland pockets located on the southern portion of the larger tract near the South Yadkin River. Neither of the two wetland areas shown on the map will be impacted by the project.

ECS conducted several site reconnaissances between July 2007 and July 2008. The proposed lake basin contains undeveloped, wooded land that was partially timbered within the last five years. A mixture of hardwoods, pines, and low lying vegetation was observed within the proposed pond basin. The remainder of the site contains a mixture of agricultural fields, pasture land and wooded land (see Upland description).

During the reconnaissances, the site was observed site for evidence of streams, ponds and wetlands. Several streams are located within the proposed lake basin. The main stream crosses through the proposed dam and forks near the upper reaches of the pond. The main stream and its tributary contain flowing water and a defined bed and bank. Based on our observations and an inspection by the U.S. Army Corps of Engineers on March 18, 2008, the stream and its tributary are perennial. Two intermittent streams are located within the pond basin. The intermittent streams begin near the eastern boundary of the pond and dissipate near the main stream. Pooled water was observed in sections of the streams. These streams were identified as non-mitigatable during the Corps' inspection. A small wetland pocket was observed next to the non-mitigatable stream. Routine wetland determination data forms supporting our opinion are included as attachments. The applicant flagged the centerline of the streams and boundary of the wetland pocket during a site visit. The stream and wetland flags were verified in the field by the Corps of Engineers.

Several additional streams, wetlands and a pond were identified on the remainder of the 700 acre tract. Impacts to these features are not anticipated. The remaining streams, wetlands and ponds were delineated in the field by ECS. The beginning of streams and their designations (as perennial or intermittent) were flagged in the field. Coordinates were gathered using a Trimble GeoXH 2005 GPS unit. The locations of wetlands were also identified in the field.

The subject property is located adjacent to the South Yadkin River and contains 14 streams. The streams have been classified as perennial and intermittent channels. Stream descriptions are included in Table 1 below.

Table 1: Streams Detail				
Stream #	Stream Classificatio n	Length of Intermittent Stream (linear feet)	Length of Perennial Stream (linear feet)	
South Yadkin River	Perennial	0	10,587	
1	Perennial	0	1,621	
2	Intermittent	455	0	
3	Intermittent	976	0	
4	Int/Per	180	2,375.39	
5	Perennial	0	1,495	
6	Per/Int	338	7,092.5	
7	Per/Int	57	1,370	
8	Perennial	0	272	
9	Intermittent	1,335.8	0	
10	Intermittent	311.4	0	
11	Per/Int	540	1406	
12	Per/Int	74	3,373	
13	Intermittent	254	0	
14	Intermittent	293	0	
	Total:	4,814.2	28,222	

Stream 1 is located on the southwestern portion of the site and is perennial throughout its entirety. It will not be impacted by the project. Stream 1 originates at the base of a dam. The pond is located immediately north of the subject property. Stream 1 contains meanders, a defined bed and bank and a moderate amount of flowing water throughout its entirety.

Stream 2 is a tributary of Stream 1. Stream 2 will not be impacted by the project. Stream 2 is intermittent and contained no flowing water, weak to moderate bed and bank definition and weak to moderate substrate sorting.

Stream 3 is an intermittent stream located on the southwestern portion of the site. Stream 3 and associated wetlands will not be impacted by the project. Stream 3 originates to the north of a partially drained pond basin. Stream 3 contains weak bed and bank definition, weak flow, and weak substrate sorting as it dissipates into the flood plain of the South Yadkin River.

Stream 4 is located on the northwestern and north central portion of the site. Stream 4 is intermittent at its origin and converges into a perennial stream at a nick point not far from its origin. A portion of Stream 4 that is perennial will be impacted by inundation of the lake. Stream 4 has a defined bed and bank, moderate to strong flow characteristics with a riffle pool

sequence, and strong substrate sorting ranging from bedrock to silt and gravel. NCDWQ Stream Evaluation Forms and USACE Stream Quality Assessment Worksheets prepared for the stream are included in Appendix III.

Stream 5 is a tributary of Stream 4. Stream 5 will not be impacted by the project. Stream 5 is a perennial stream with meanders, a defined bed and bank and moderate flow.

Stream 6 is located on the central portion of the site. Stream 6 will be impacted by construction of the dam and by inundation of the lake. Stream 6 is a perennial stream that appears to have been straightened in the past. Stream 6 contains strong flow and has incised banks and heavy sediment loading in its bed. Two intermittent features converge at the origin of stream 6. Wetland pockets are located along the upper reaches of Stream 6 before it converges with Stream 7. NCDWQ Stream Evaluation Forms and USACE Stream Quality Assessment Worksheets prepared for the stream are included in Appendix III of the application.

Stream 7 is a tributary of Stream 6. The majority of Stream 7 will not be impacted by the project. The lower reach will be impacted by inundation of the lake. Stream 7 is intermittent at its origin and perennial for its remainder. The majority of Stream 7 contains meanders, a defined bed and bank and a moderate amount of flowing water. NCDWQ Stream Evaluation Forms and USACE Stream Quality Assessment Worksheets prepared for the stream are included in Appendix III of the application.

Stream 8 is a perennial stream and a tributary of Stream 7. Stream 8 will not be impacted by the project. Stream 8 originates at the base of a dam associated with a pond located north of the subject property. Stream 8 contains meanders, a defined bed and bank and a moderate amount of flowing water throughout its entirety.

Stream 9 and Stream 10 are intermittent streams located on the central portion of the site. Portions of Stream 9 and Stream 10 will be inundated by the lake. Stream 9 contains a weak bed and bank structure, pooled water, and no substrate sorting. Stream 9 and Stream 10 dissipate into the flood plain of Stream 6.

Stream 11 is located on the southeastern portion of the site. Stream 11 will not be impacted by the project. Stream 11 originates at the convergence of two intermittent streams. Stream 11 is perennial and contains wetlands along its entirety. It dissipates into a wetland located in the floodplain of the South Yadkin River.

Stream 12 is located on the eastern portion of the site. Stream 12 will not be impacted by the project. Stream 12 is an intermittent stream near its origin and perennial for its remainder. Stream 12 contains meanders, a defined bed and bank, substrate sorting and strong flow characteristics.

Stream 13 and Stream 14 are intermittent streams that discharge into the flood plains of Stream 12 and the South Yadkin River. The streams will not be impacted by the project. Stream 13 and Stream 14 contain weak bed and bank definition, weak to no flow and silty substrate.

#### **Wetlands**

Descriptions of jurisdictional wetlands located on the site are included in the application. See Figure 7 in the application for wetland locations and identification.

On-site Wetlands		
Wetland ID	Approximate Acreage	
А	0.243	
В	0.010	
С	0.160	
D	4.433	
E	0.299	
F	1.501	
G	0.010	
Total:	6.656	

The proposed lake basin consists of wooded land that was selectively harvested in the last 5 years. Wetland B is located within the proposed lake basin. The remaining wetlands will not be impacted by the project. In addition, these wetlands are located in proximity to the streams and will be protected by a conservation easement and associated 300 foot riparian buffers that will be placed around the perennial streams and the South Yadkin River. The wetlands are separated from uplands by distinct breaks in topography and vegetative species. Wetland A is located within a semi-drained pond basin. The remaining wetlands can be characterized as seeps and flood plain wetlands. Typical vegetation that was identified in the wetlands includes sedges and rush species. Routine Wetland Determination data forms are included in Appendix II.

#### **Applicant's Stated Purpose**

The stated purpose of the project is to develop an approximate 700 acre tract acquired by the Girl Scouts Hornets Nest to be used to construct a Girl Scout Environmental Leadership Center. The Center will accommodate an expected service population of 20,000 Girl Scouts per year. The primary use of the center will be to educate Girl Scouts about the environment, natural resources, and renewable energy. In order for the property to be developed for its intended use, a solar field, organic gardens, cabins, nature trails, recreational fields, an environmental center, and a lake must be constructed on the site.

#### **Project Description**

The Girl Scouts have acquired an approximate 700 acre tract located on Fairmont Road north of Statesville, North Carolina. The project includes the construction of an approximate 23.42 acre lake. Stream impacts are required to facilitate the construction of the lake. The property was acquired to develop a Girl Scout Environmental Academy. The proposed Girl Scout Environmental Academy will consist of multiple land use activity areas centralized around the proposed lake. Other facilities or land use activities will include a camp center, aquatics center, equestrian center, sporting activities, environmental study area, trails, encampment area, and

other uses. The lake will be the key feature of the academy. The site will not be used or developed with the environmental academy without the construction of the lake.

The project will utilize LEED certified construction with environmentally friendly building materials and energy sources. The academy will contain land uses that will cater to environmental education activities. Environmental programs and development features will include: organic gardens and orchards with the lake as the irrigation source, a nature preserve that has been proposed to be placed under a permanent conservation easement, an environmental education center, rainwater collection, solar energy, 300 foot riparian buffers around streams and the South Yadkin River placed under a conservation easement and the creation of new habitats for waterfowl and other wildlife.

A 17 acre solar field will provide clean energy for the program facilities and also provide an excellent vehicle for girls to learn about renewable energy. Excess energy created on site will be released back into the energy grid. The solar field will use sheep/goats to maintain the grounds, providing an additional educational opportunity for girls. There are ample research and education opportunities available that could be conducted in part and used as an educational tool by the Girl Scouts including, but not limited to, aquatic and wildlife studies directed by universities and governmental agencies. The Girl Scouts intend to examine irrigation designs to use natural rain water collection for irrigation of fields, gardens, and common areas. The Girl Scouts will seek to work with ECS and others on informational/educational programs for wetlands, drainage, floodplain, and soil analysis.

## **Uplands**

After conducting a site inspection and conferring with ECS, the majority of the site consists of uplands. These uplands are comprised of abandoned pasture (the site used to be a cattle operation) and mixed hardwoods and pines native to the Piedmont region of North Carolina. The uplands are located in coves leading down to drainages, slopes, ridge areas, and floodplain located adjacent to the South Yadkin River.

#### **Proposed Mitigation**

The Girls Scouts have shown an attempt to avoid and minimize impacts to waters of the U.S. where possible and will compensate to the extent practicable, for remaining unavoidable losses to waters with mitigation. The proposed project will impact 1,267.9 linear feet of non-mitigatable stream channel. The non-mitigatable stream channel includes intermittent streams that are aquatically insignificant. These streams contain no flowing water much of the time with pools of water present only in portions of the stream. The intermittent features dissipate into the floodplains and do not physically connect to other streams or water bodies. The project will impact 0.01 acres of wetland. Because the wetland impact does not exceed 0.10 acres, mitigation for wetland impact is not proposed. However, the remaining wetlands located on the site will be preserved because they are located within proposed stream buffers.

The project will impact 3,993 linear feet of mitigatable stream channel. With the exception of the upper reaches that will be impacted by inundation, the stream is high banked. The banks of the stream are unstable in most areas. The banks contain bare soil, have been undercut and in their current state are a source of erosion and sediment into down gradient water bodies. Although perennial, the mitigatable streams appear to have been straightened in the past and further degraded by timber harvesting. The proposed mitigation is included in Table 6.

Table 6: Proposed Mitigation and Required Credits					
Impact	Linear Feet	<b>Proposed Mitigation</b>	<b>Required Credits</b>		
		Ratio			
Dam Fill	323	1:1	323		
Rip Rap	115	1:1	115		
Inundation	3,554	0.5:1	1777		
		Total:	2,215		

The Girl Scouts propose that the mitigation ratio from the impacts resulting from inundation (3,555 linear feet) be set at a ½:1 ratio. These impacts will be compensated through the establishment of conservation easements on the Girl Scout site and on neighboring properties that will restrict future impacts to perennial streams and in buffers established around the streams. There are approximately 15,012 linear feet of perennial streams located on the site that will be buffered and permanently protected by the conservation easement. In addition, a conservation easement and associated buffer will be placed on the north side of the South Yadkin River with the exception of approximately 200 linear feet of the river that will contain access to and from the river. As a result, of the 10,587 linear feet of river that borders the site, the Girl Scouts are proposing that mitigation credits for buffering the north side of the South Yadkin River be based on a length of half its total less the 200 linear feet (5,193 linear feet). The total length of streams that will be buffered is 20,106 linear feet.

There are approximately 6.646 acres of wetlands located within the 300 feet riparian buffers that will also be preserved. In addition, the Girl Scouts are working with adjoining landowners to promote similar easements on their properties. Potentially, approximately 6,470 linear feet of perennial stream and approximately 1,000 linear feet of the south side of the South Yadkin River will be placed in conservation easements on adjoining properties. The buffers will provide important long term benefits such as water quality benefits, aquatic species habitat support (e.g., shading) and watershed protection in addition to habitat for upland wildlife. These benefits would not be realized if different development scenarios occurred (e.g., residential development), as there are no state mandated buffers required. At ½:1 ratio, the 20,106 linear feet of stream that will be buffered and preserved on site will more than off-set the impacts to the stream by inundation. The streams that will be buffered on nearby properties are an added benefit and are not being used to offset impacts. In addition, natural buffers will remain around approximately 75% of the lake.

Mitigation Credits for Preservation			
Stream	Unimpacted Length of Stream (linear feet) to be Buffered	Credit Ratio	Mitigation Credits Gained
South Yadkin River	5,094	10:1	509.35
1	1,621	10:1	162.1
2	0	10:1	0
3	0	10:1	0
4	1,295	10:1	129.5
5	1,495	10:1	149.5
6	4,240	10:1	423.989
7	1,310	10:1	130.998
8	272	10:1	27.2
9	0	10:1	0
10	0	10:1	0
11	1,406	10:1	140.6
12	3,373	10:1	337.3
13	0	10:1	0
14	0	10:1	0
	Т	otal Credit Gained:	2,010.537

The Girl Scouts propose to compensate for fill impacts for the construction of the dam by offering payment into the Ecosystem Enhancement Program (EEP) at a 1:1 ratio. Table 8 provides mitigation credits gained through payment into the EEP.

Table 8: Mitigation Credits for EEP Payment				
Impact Type	EEP Payment Credit Ratio Mitigation			
	Amount	(Impact/Credit)	Credit	
Fill Impacts	322.98	1:1	322.98	
Riprap Impacts	114.69	1:1	114.69	
Total Credit Gained: 437.67				

There are no additional impacts that will require mitigation. At the ratios proposed, the Girl Scouts will receive 2,448 credits, exceeding the 2,215 mitigation credits proposed.

Plans showing the work are included with this public notice.

#### **Other Required Authorizations**

This notice and all applicable application materials are being forwarded to the appropriate State agencies for review. The Corps will generally not make a final permit decision until the North Carolina Division of Water Quality (NCDWQ) issues, denies, or waives State certification required by Section 401 of the Clean Water Act (PL 92-500). The receipt of the application and this public notice combined with appropriate application fee at the North Carolina Division of Water Quality central office in Raleigh will constitute initial receipt of an application for a 401 Water Quality Certification. A waiver will be deemed to occur if the NCDWQ fails to act on this request for certification within sixty days of the date of the receipt of this notice in the NCDWQ Central Office. Additional information regarding the Clean Water Act certification may be reviewed at the NCDWQ Central Office, 401 Oversight and Express Permits Unit, 2321 Crabtree Boulevard, Raleigh, North Carolina 27604-2260. All persons desiring to make comments regarding the application for certification under Section 401 of the Clean Water Act should do so in writing delivered to the North Carolina Division of Water Quality (NCDWQ), 2321 Crabtree Boulevard, Raleigh, North Carolina 27604-2260 Attention: Ms Cyndi Karoly by October 30, 2008.

#### **Cultural Resources**

The Corps has consulted the latest published version of the National Register of Historic Places and is not aware that any registered properties, or properties listed as being eligible for inclusion therein are located within the project area or will be affected by the proposed work. Presently, unknown archeological, scientific, prehistoric, or historical data may be located within the project area and/or could be affected by the proposed work.

## **Endangered Species**

The Corps has reviewed the project area, examined all information provided by the applicant and consulted the latest North Carolina Natural Heritage Database. Based on available information, the Corps is not aware of the presence of species listed as threatened or endangered or their critical habitat formally designated pursuant to the Endangered Species Act of 1973 (ESA) within the project area. A final determination on the effects of the proposed project will be made upon additional review of the project and completion of any necessary biological assessment and/or consultation with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service.

#### **Evaluation**

The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife

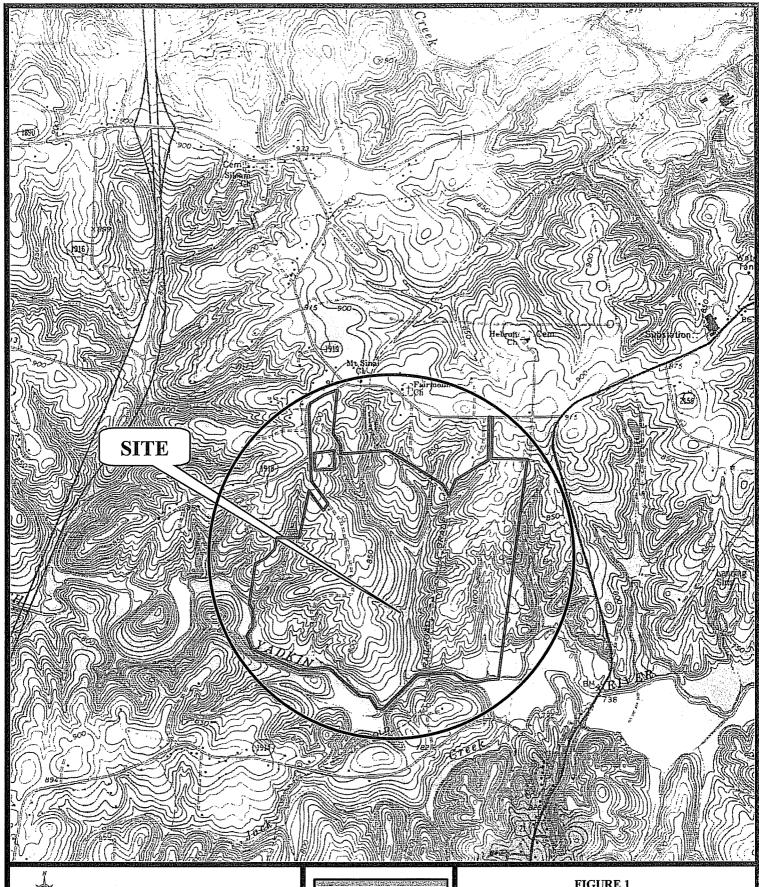
values, flood hazards, flood plain values (in accordance with Executive Order 11988), land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people. For activities involving the discharge of dredged or fill materials in waters of the United States, the evaluation of the impact of the activity on the public interest will include application of the Environmental Protection Agency's 404(b)(1) guidelines.

#### **Commenting Information**

The Corps is soliciting comments from the public; Federal, State and local agencies and officials; Indian Tribes and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment (EA) and/or an Environmental Impact Statement (EIS) pursuant to the National Environmental Policy Act (NEPA). Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider the application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing. Requests for a public hearing shall be granted, unless the District Commander determines that the issues raised are insubstantial or there is otherwise no valid interest to be served by a hearing.

Written comments pertinent to the proposed work, as outlined above, will be received by the Corps of Engineers, Wilmington District, until 5pm, October 30, 2008. Comments should be submitted to Mr. Steve Chapin, U.S. Army Corps of Engineers, 151 Patton Avenue, Room 208, Asheville, North Carolina 28801-5006.





#### SOURCE:

USGS TOPOGRAPHIC MAP HARMONY, NC QUADRANGLE **DATED 193** 

SCALE: 1" = 2,000

ACTION ID. SAW-2008-00858 SHEET L OF L

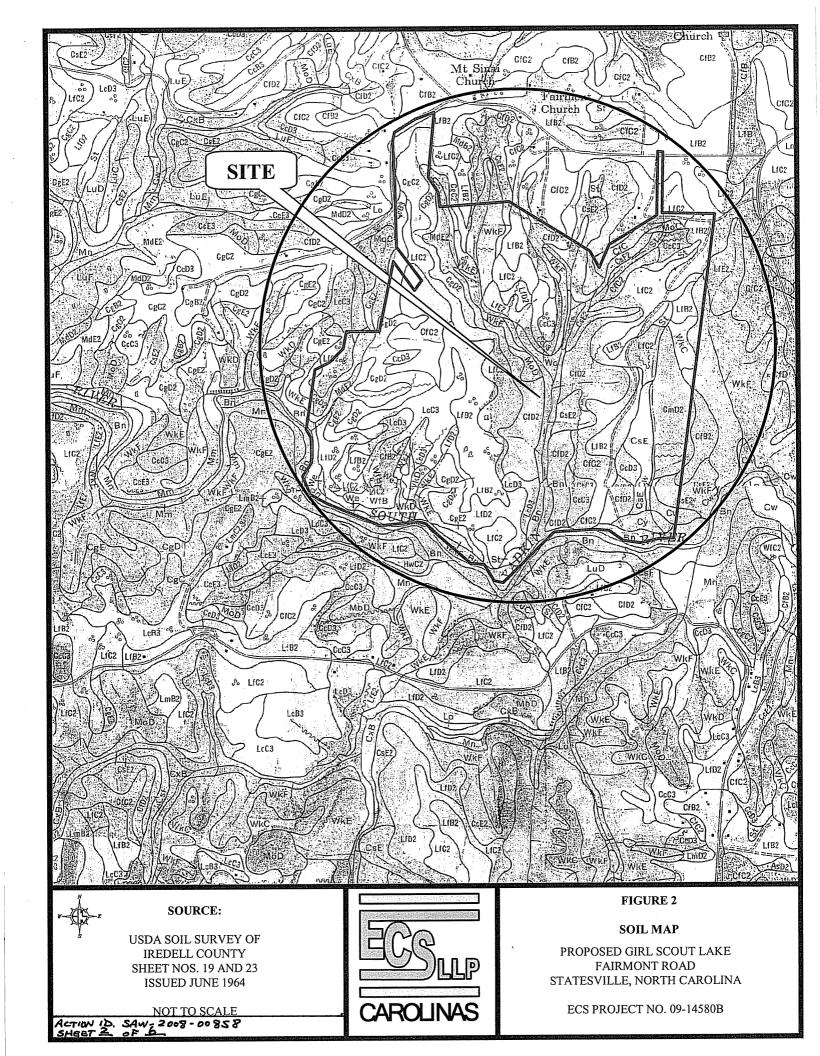


#### FIGURE 1

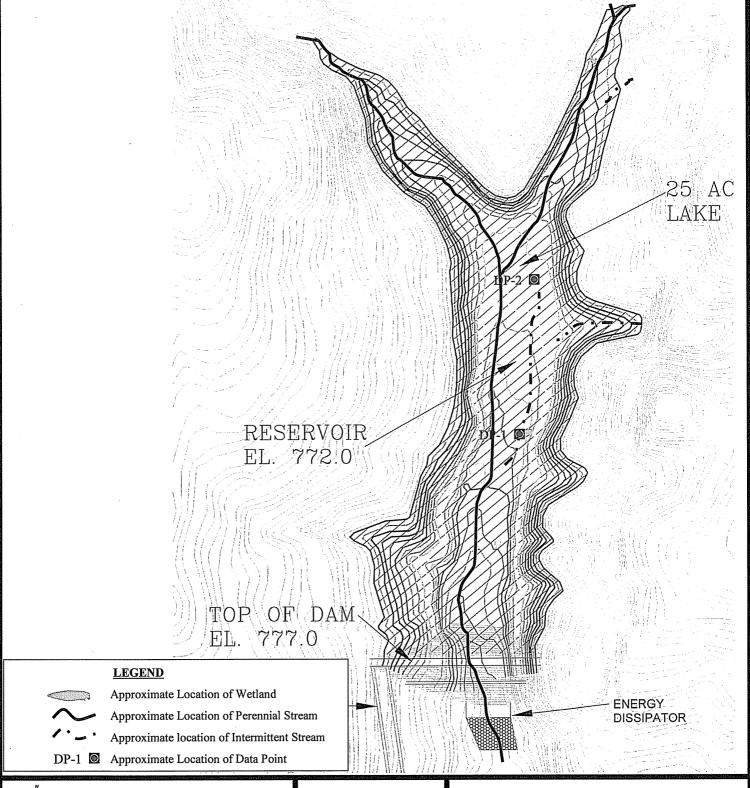
#### SITE LOCATION MAP

PROPOSED GIRL SCOUT LAKE FAIRMONT ROAD STATESVILLE, NORTH CAROLINA

ECS PROJECT NO. 09-14580B



THE STREAM/WETLAND LOCATIONS SHOWN ON THIS MAP ARE APPROXIMATE. THEY HAVE BEEN DELINEATED BY ECS. THEY HAVE NOT BEEN VERIFIED BY THE U.S. ARMY CORPS OF ENGINEERS. THEY ARE CURRENTLY BEING SURVEYED.





#### SOURCE:

PROPOSED LAKE DRAWING SHOWING TOPOGRAPHY GENERATED BY ECS PERSONNEL AND FIELD NOTES BY ECS PERSONNEL

NOT TO SCALE...

Action 10. SAW-2008-00858 SHEET 3 OF 6

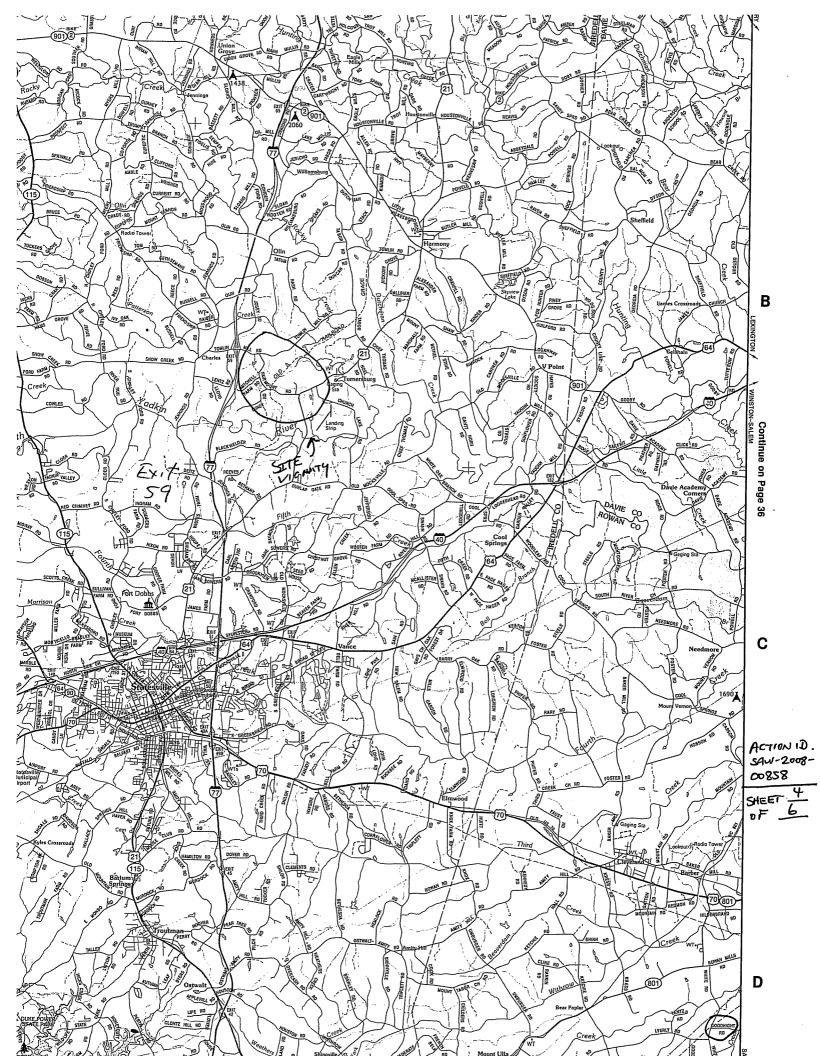


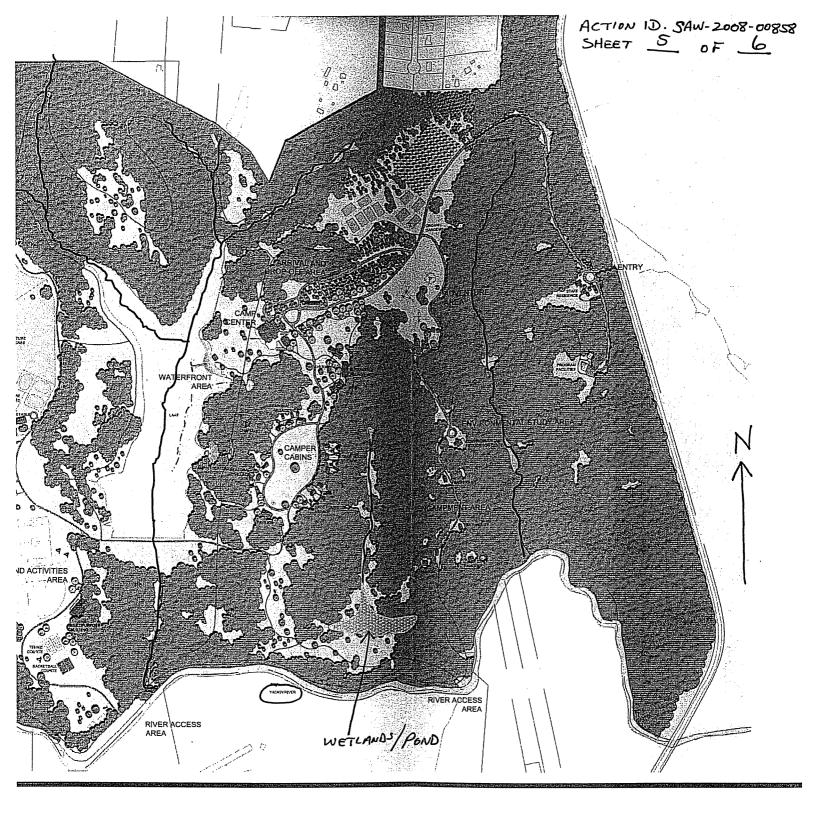
#### FIGURE 3

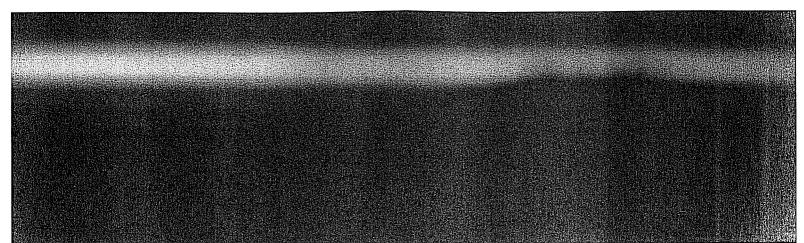
# STREAM/WETLAND LOCATION MAP

PROPOSED GIRL SCOUT LAKE FAIRMONT ROAD STATESVILLE, NORTH CAROLINA

ECS PROJECT NO. 09-14580B







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# ADJOINING PROPERTY OWNERS KEY

